

CLAIMS:

1. A vehicle door outside handle apparatus comprising:
a handle frame fixed to a vehicle door;
a handle portion supported on the handle frame to be accessible from an outside of the vehicle door;
at least one electrical component housed in the handle portion;
a handle-side connected portion provided at the handle portion and electrically connected to the at least one electrical component housed in the handle portion; and
a frame-side connected portion provided at the handle frame, the frame-side connected portion being adapted to be engaged with the handle-side connected portion, and the frame-side connected portion being electrically connected with the handle-side connected portion.
2. The outside handle apparatus according to claim 1, wherein the frame-side connected portion is adapted to come in contact with the handle-side connected portion to pivot the frame-side connected portion, wherein the electrical connection between the handle-side connected portion and the frame-side connected portion is achieved.
3. The outside handle apparatus according to claim 2, wherein the handle-side connected portion includes at least one first lead and the frame-side connected portion includes at least one second lead, the at least one first lead of the handle-side connected portion engaged with the at least one second lead of the frame-side connected portion to provide the electrical connection.
4. The outside handle apparatus according to claim 3, further comprising:

means for biasing for applying a biasing force to the frame-side connected portion to urge the frame-side connected portion toward the handle-side connected portion to electrically connect the frame-side connected portion with the handle-side connected portion.

5. The outside handle apparatus according to claim 4, wherein the means for biasing is provided at the handle frame and includes at least one of a torsion spring, a leaf spring, and a rubber.

6. An outside handle apparatus comprising:
a handle frame fixed to a vehicle door;
a handle portion supported on the handle frame to be accessible from an outside of the vehicle door;
at least one electrical component housed in the handle portion;
a handle-side connected portion provided at the handle portion and electrically connected to the at least one electrical component housed in the handle portion;
a frame-side connected portion provided at the handle frame, and
the handle-side connected portion being adapted to be engaged with the frame-side connected portion, and the handle-side connected portion being electrically connected with the frame-side connected portion.

7. The outside handle apparatus according to claim 6, wherein the handle-side connected portion is adapted to come in contact with the frame-side connected portion to pivot the handle-side connected portion, wherein the electrical connection between the handle-side connected portion and the frame-side connected portion is achieved.

8. The outside handle apparatus according to claim 7, wherein the handle-side connected portion includes at least one first lead and the frame-side connected portion includes at least one second lead, the at least one first lead of the handle-side connected portion engaged with the at least one second lead of the frame-side connected portion to achieve the electrical connection.

9. The outside handle apparatus according to claim 8, further comprising:
means for biasing for applying a biasing force to the handle-side connected portion to urge the handle-side connected portion toward the frame-side connected portion to electrically connect the handle-side connected portion with the frame-side connected portion.

10. The outside handle apparatus according to claim 9, wherein the means for biasing is provided at the handle portion and includes at least one of a torsion spring, a leaf spring, and a rubber.

11. The outside handle apparatus according to claim 7, wherein the handle-side connected portion and the frame-side connected portion are electrically connected when the handle-side connected portion is mated with the frame-side connected portion.

12. The outside handle apparatus according to claim 11, wherein the handle frame includes means for engaging the frame-side connected portion, and the handle-side connected portion includes means for allowing the handle portion to be assembled at a predetermined position after completely mating the handle-side connected portion with the frame-side connected portion.

13. The outside handle apparatus according to claim 12, wherein the means for allowing the handle portion to be assembled at the predetermined position releases the engaged condition of the frame-side connected portion engaged by the means for engaging.

14. The outside handle apparatus according to claim 11, wherein the handle-side connected portion of the handle portion is a connector, and the frame-side connected portion of the handle frame is a connector holder, the connector being engaged with the connector holder to provide the electrical connection.

15. The outside handle apparatus according to claim 12, wherein the handle-side connected portion of the handle portion is a connector, and the frame-side connected portion of the handle frame is a connector holder, the connector being engaged with the connector holder to provide the electrical connection.

16. A method of electrically connecting a handle portion of a vehicle with a handle frame comprising:

inserting a part of a handle portion into a handle frame which is fixed to a door of a vehicle to mount the handle portion at a position accessible from outside the vehicle, the handle portion including a first electrical portion and the handle frame including a second electrical portion; and

the first electrical portion of the handle portion electrically mating with the second electrical portion of the handle frame upon insertion of the part of the handle portion into the handle frame to electrically connect the first electrical portion of the handle portion with the second electrical portion of the handle frame.

17. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 16, wherein the handle portion houses at least one electrical component that is electrically connected to the first electrical portion of the handle portion, the at least one electrical component being electrically connected to the second electrical portion of the handle frame upon insertion of the part of the handle portion into the handle frame.

18. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 17, wherein the first electrical portion of the handle portion includes at least one first lead and the second electrical portion of the handle frame includes at least one second lead, the at least one first lead of the handle portion engaged with the second lead of the handle frame to provide the electrical connection.

19. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 18, wherein the handle frame is provided with means for biasing for biasing the second electrical portion of the handle frame towards the first electrical portion of the handle portion.

20. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 19, wherein the means for biasing includes at least one of a torsion spring, a leaf spring, and a rubber.

21. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 18, wherein the handle portion is provided with means for

biasing for biasing the first electrical portion of the handle portion towards the second electrical portion of the handle frame.

22. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 21, wherein the means for biasing includes at least one of a torsion spring, a leaf spring, and a rubber.

23. The method of electrically connecting a handle portion of a vehicle with a handle frame according to claim 16, wherein the first electrical portion of the handle portion is a connector, and the second electrical portion of the handle frame is a connector holder, the connector being engaged with the connector holder to provide the electrical connection.

24. A connector mechanism comprising:

- a handle frame fixed to a vehicle door;
- a handle portion supported on the handle frame to be accessible from an outside of the vehicle door;
- at least one electrical component housed in the handle portion;
- a handle-side connected portion provided at the handle portion and electrically connected to the at least one electrical component housed in the handle portion;
- a frame-side connected portion provided at a handle frame, the frame-side connected portion being adapted to be mated with the handle-side connected portion, the frame-side connected portion being electrically connected with the handle-side connected portion;
- means for engaging the frame-side connected portion; and

means for allowing the handle portion to be assembled at a predetermined position after completely mating the handle-side connected portion with the frame-side connected portion.

25. The connector mechanism according to claim 24, wherein the means for allowing the handle portion to be assembled at the predetermined position releases an engaged condition of the frame-side connected portion engaged by the means for engaging.